

a wirelessly controlled medical infusion apparatus, a prosthetic limb, such as a robotic arm, may also come into contact with human skin or other dielectric materials and benefit from the reduction of electrical disturbances associated with such an antenna. In other various embodiments, the SRR antenna **2508** may be integrated into any device comprised of the electrical components capable of powering and transmitting/receiving data to an antenna and susceptible to electrical disturbances associated with proximity to dielectric materials.

[0883] In various embodiments, a SRR antenna **2508** may be integrated into a configuration of medical components in which one or more implantable medical devices, operating within the human body, communicate wirelessly to a handheld, body-mounted, or remote control unit. In certain embodiments, both body-mounted and in-body wireless devices may utilize a SRR antenna **2508** for wireless communication. Additionally, one or more of the components utilizing a SRR antenna **2508** may be completely surrounded by human skin, tissue or other dielectric material. By way of example, such a configuration may be used in conjunction with a heart monitoring/control system where stability and consistency of wireless data transmission are of fundamental concern.

[0884] In various other embodiments, a SRR antenna **2508** may be integrated into the embodiments of the infusion pump assembly. configuration of medical components in which one or more electrical sensors positioned on, or attached to, the human body wirelessly communicate to a remote transceiving unit. By way of example, a plurality of electrodes positioned on the body may be coupled to a wireless unit employing a SRR antenna **2508** for wireless transmission to a remotely located electrocardiogram machine. By way of further example, a wireless temperature sensor in contact with human skin may employ SRR antenna **2508** for wireless communication to a controller unit for temperature regulation of the room in which the sensor resides.

[0885] A number of embodiments have been described. Nevertheless, it will be understood that various modifications may be made. Accordingly, other embodiments are within the scope of the following claims.

1-20. (canceled)

21. A method for pairing a remote control assembly and a wearable infusion pump assembly, the wearable infusion pump assembly having a reusable housing assembly, a disposable housing assembly including a reservoir with an infusible fluid, a switch assembly configured to effectuate a functionality of an infusion pump assembly, a processor, and a computer readable medium coupled to the processor, the computer readable medium including a plurality of instructions stored thereon which, when executed by the processor, cause the processor to perform operations, the method comprising:

- releasably engaging the reusable housing assembly to the disposable housing assembly;
- receiving a pairing initiation signal from the switch assembly indicative of a pairing event;
- monitoring for receipt of a pairing request from a remote control assembly;
- if the pairing request is received, providing a pairing request acknowledgment message to the remote control

- assembly, wherein the pairing request acknowledgment message uniquely identifies the wearable infusion pump assembly;
- monitoring for receipt of a pairing confirm request from the remote control assembly; and
- if the pairing confirm request is received, providing a pairing confirm acknowledgment message to the remote control assembly.

22. The method of claim **21** wherein wherein the computer readable medium further includes a second plurality of instructions stored thereon which, when executed by the processor, the method further comprising:

- receiving an initiation signal from the switch assembly indicative of a bolus infusion event;
- receiving a dose signal from the switch assembly indicative of at least a portion of a bolus quantity of the infusible fluid;
- rendering an audible quantity signal in response to the dose signal; and
- receiving an approval signal from the switch assembly indicative of a concurrence with the audible quantity signal.

23. The method of claim **22** further comprising:

- administering the bolus quantity of the infusible fluid.

24. The method of claim **21** wherein the functionality includes a separation detection functionality, the method further comprising:

- transmitting a ping signal to the remote control assembly;
- monitoring for receipt of a reply signal from the remote control assembly in response to the ping signal; and
- if the reply signal is not received within a defined period of time, rendering an audible separation alarm.

25. The method of claim **24** further comprising the steps of:

- receiving an alarm override signal from the switch assembly indicative of a desire to silence the separation alarm; and
- silencing the separation alarm.

26. The method of claim **21**, wherein providing a pairing confirm acknowledgment message to the remote control assembly further includes providing a serial number of the wearable infusion pump assembly.

27. The method of claim **21**, further comprising:

- administering a bolus quantity of the infusible fluid via the wearable infusion pump assembly.

28. The method of claim **21** wherein the step of releasably engaging includes rotating the reusable housing assembly and disposable housing assembly relative to each other.

29. A method for pairing a remote control assembly to an infusion pump assembly, the infusion pump assembly having a disposable housing assembly including a reservoir with an infusible fluid, a reusable housing assembly including a mechanical control assembly wherein the mechanical control assembly including a pump assembly with at least one shape-memory actuator configured to actuate the pump assembly and at least one valve assembly, and a switch assembly configured to effectuate a pairing functionality of the infusion pump assembly, the method comprising:

- releasably engaging the reusable housing assembly to the disposable housing assembly;
- receiving a pairing initiation signal from the switch assembly included within the wearable infusion pump assembly, the pairing initiation signal indicative of a pairing event;